Report for 2002CA2B: The effect of Soil Water Content on Organic Chemical Sorption During Transport Through Unsaturated Soil

- unclassified:
  - One in submission. None published

Report Follows:

PROJECT SUMMARY:

A series of controlled experiments of pesticide transport at different water contents showed a significant increase in the amount of sorption occurring at lower water contents. The effect of this increased sorption is to slow down the movement of pesticide relative to both water and nonsorbing tracers (e.g. nitrates) which actually increase their speed as water content decreases in a steady water flow system. Implications of this effect were explored in modeling exercises which demonstrated two effects: pesticides will take longer to reach groundwater than previously calculated by models not including this effect; and the spatial variability of pesticide movement relative to variability of tracer and water movement will be less than previously estimated.

INFORMATION TRANSFER PROGRAM:

Presentation at Western Regional Research meeting W-188

STUDENT SUPPORT:

Partial support for Han-Song On, who did part of his dissertation research for Korea Univ. at UCR. Partial support for postdoctoral researcher Atac Tuli

NIWR – USGS STUDENT INTERNSHIP PROGRAM:

N/A

NOTABLE ACHIEVEMENTS AND AWARDS:

Provide a brief description of any especially notable achievements and awards resulting from work supported by both federal and matching funds, and by supplemental grants during the reporting period.